

ABSTRACT

BACKGROUND: The genes encoding the Human Leucocyte Antigen (HLA) have been considered candidate markers for Generalized Aggressive Periodontitis (GAgP), because they are involved in regulating immune responses. Several studies have examined this association and despite the inconclusive results, HLA-B*15 have been found to be consistently associated with the destructive form of periodontitis in many populations. Ethnic factors are considered to be a major variable for evaluating the predisposition to the disease.

AIM: To investigate the association of HLA-B*15 and evaluate the role of genetic risk factor in the severity of GAgP patients, who reported to Department of Periodontics, Sri Ramakrishna Dental College and Hospital, Coimbatore district.

MATERIALS AND METHODS: The study included 49 subjects from ethnic Tamil Nadu population residing in Coimbatore district, who were divided into two groups. Group I consisted of 23 GAgP patients and group II consisted of 26 subjects with gingivitis or subjects having clinical attachment loss of less than 3 mm, with age ranging from 20 to 35 years. 3ml of venous blood was collected from antecubital fossa and DNA extraction was done. HLA-B*15 typing was carried out using the polymerase chain reaction with sequence specific primer (PCR-SSP)-based molecular method and the visualization was performed in a 1.5% agarose gel electrophoresis and the statistical analysis of data was performed with Mann-Whitney U test.

RESULTS: The characteristic features of the study groups revealed a statistically significant difference between GAgP patients and controls in the mean values of Plaque Index (PII), probing depth (PD) and clinical attachment level (CAL). Gingival

Index (GI) showed no statistical significant difference among two groups. There was no genetic association of HLA-B*15 in the study groups.

CONCLUSION: In the present study, there was no genetic association of HLA-B*15 among the GAgP patients and control group.

KEY WORDS:

Generalized Aggressive Periodontitis; Human Leucocyte Antigen-B*15; genetic factor; ethnicity.